



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

**RESPONSE TO COMMENTS
DRAFT NPDES PERMIT ID0024490
CITY OF CULDESAC
WASTEWATER TREATMENT PLANT**

A draft National pollutant Discharge Elimination System (NPDES) permit for the City of Culdesac Wastewater Treatment Plant was issued for public notice on August 5, 2002. This public notice initiated a public comment period that lasted 30 days. This document responds to comments received during the comment period. EPA received comments from Thomas, Dean & Hoskins, Inc. Engineering Consultants (TD&H) as the consulting firm for the City of Culdesac. The state of Idaho Department of Environmental Quality (IDEQ) submitted a final certification of this permit to EPA under Section 401 of the Clean Water Act on August 7, 2002. The IDEQ certified that the terms and conditions of the draft permit provided reasonable assurance that the discharge would comply with the requirements of the Clean Water Act and state water quality standards.

Comments from TD&H

1. **Comment.** The proposed requirement for sample frequency of influent and effluent monitoring for BOD, TSS, and E. Coli was once per week. This frequency of monitoring for an aerated lagoon with 36 days detention followed by an intermittent sand filter seems inappropriate, particularly for a small rural community with no industrial discharge. The long detention time coupled with additional treatment in the intermittent sand filter will provide a very consistent effluent despite variations in influent level. Monthly monitoring should be more than adequate. Quarterly monitoring would be appropriate.

Response. The Disinfection Requirements for Sewage Wastewater Treatment Plant Effluent in the Idaho water quality standards (IDAPA 58.01.02.420.05) specify that E. coli concentrations in secondary treated effluent must not exceed a geometric mean of 200/100 mL based on no more than one week's data and a minimum of five samples. Therefore, the draft permit was consistent with the Idaho water quality standards. The Idaho Department of Environmental Quality (IDEQ) has indicated that the monitoring frequency of once per week (or four times per month) will meet their disinfection treatment requirements. Therefore, the monitoring frequency for E. coli remains unchanged in the final permit.

Monitoring is necessary to establish the treatment efficiency of the facility as well as the variability of the effluent. The monitoring frequency proposed in the draft permit is consistent with the monitoring frequency of other small rural communities that operate similar treatment systems. The City has been land applying their effluent for over twenty years and has not monitored their influent nor effluent; thus, there is no data to support the contention that the effluent will meet the secondary treatment requirements in the permit.

Both EPA and IDEQ believe this information is necessary to establish effluent quality. IDEQ is concerned about the effluent quality, regardless of whether the discharge will continue to Lapwai Creek or will be land applied to reconstructed percolation trenches. Should the City continue to discharge long enough to require re-issuance of this permit (i.e., longer than 5 years), the permitting authority will consider monitoring reductions at that time. Therefore, the monitoring frequency for BOD and TSS remains unchanged in the final permit.

2. **Comment.** The proposed requirement for sample type of BOD, TSS and ammonia was 24-hour composite. The long detention time (i.e., 36 hours) will average out effluent quality and a composite effluent sample will not provide any significant improved performance data over a simple grab sample. TD&H agrees that composite sampling of the raw influent is appropriate to determine the influent BOD and TSS load. TD&H believes that the data has little practical use in terms of permit compliance, and require either additional labor or automated sampling equipment which are costly.

Response. As stated above in #1, there is no information to show that the effluent quality of this treatment facility will be constant. A single grab sample only represents the effluent quality at the time the sample was taken. It would be inappropriate to require a composite sample of the influent and a grab of the effluent and use those values to calculate the percent removal. The samples must be collected over the same time period in order to accurately reflect the percent removal.

Other similar lagoon systems in the area have shown variability in their effluent quality that could only be accounted for through a composite sample. Since this is a new discharger, EPA does not have any operational and maintenance history for this facility which is key in determining the effluent variability. If the facility should seek to revisit this issue under reissuance of this permit, they can provide the data to support that a grab sample is not statistically different from a composite sample of their effluent. EPA has decided to change the 24-hour composite to an 8-hour grab composite to be consistent with the sampling requirements for similar small rural communities. The final permit requires 8-hour grab composite samples for BOD, TSS, and ammonia.

3. **Comment.** The proposed requirement for monitoring frequency of pH and temperature was five days per week. TD&H believes that this requirement is excessive given the type of treatment system. The values for these parameters will most likely change slowly and once per week should be adequate.

Response. Monitoring is necessary to establish the treatment efficiency of the facility as well as the variability of the wastewater. The monitoring frequency proposed in the draft permit is consistent with the monitoring frequency of other small rural communities that operate similar treatment systems. The City has been land applying their effluent for over twenty years and has not monitored pH or temperature of effluent; thus, there is no data to support the belief that the effluent will meet the secondary treatment requirement for pH in

the permit nor establish temperature variability. Both EPA and IDEQ believe this information is necessary to establish effluent quality. IDEQ is concerned about the effluent quality, regardless of whether the discharge will continue to Lapwai Creek or will be land applied to reconstructed percolation trenches. Should the City continue to discharge long enough to require re-issuance of this permit (i.e., longer than 5 years), the permitting authority will consider monitoring reductions at that time. Therefore, the monitoring frequency for pH and temperature remains unchanged in the final permit.

4. **Comment.** The proposed permit required continuous effluent flow monitoring. The plant currently has a metering weir between the aerated treatment ponds and the intermittent sand filters. The filters are lined to prevent loss to the groundwater system. Although the intermittent sand filter is intermittently dosed at higher rates, the total flow per day should be the same. TD&H requested that the existing metering location be considered adequate in order to avoid the cost of constructing an additional metering point.

Response. EPA and IDEQ do not believe that the existing metering location is adequate and maintain that the flow monitoring occur on the effluent. Monitoring flow at an intermittent stage in the treatment process may not account for losses in flow due to leakage, sludge deposition, or evaporation. Monitoring effluent flow is key to understanding how well the facility is operated and maintained.

5. **Comment.** The plant in its current configuration is not set up to dechlorinate. The proposed permit limit on E. coli bacteria and chlorine residual will probably require dechlorination in order to achieve compliance. Additional equipment and a structure will be required and the cost will be substantial. A performance trial period may indicate that compliance can be achieved by careful operation without dechlorination. TD&H inquired whether it would be possible to pursue this option before adding the additional treatment equipment.

Response. The IDEQ has not authorized a compliance schedule for either E. coli bacteria or residual chlorine; therefore, the facility is required to meet the proposed effluent limitations. If the facility finds that they are not able to meet the residual chlorine limit while maintaining the E. Coli bacteria limit, EPA and IDEQ can assist the facility in addressing this problem at that time. Under such circumstances, EPA usually will issue a compliance order that would require the facility to install the equipment necessary to meet the effluent limits under a specific schedule.

6. **Comment.** The comments submitted are primarily with regard to associated costs of monitoring. Culdesac is a small community that is financially challenged. The proposed testing requirement will cost about \$350-500 per month for laboratory analysis, depending on how much can be done by City staff. This does not include additional labor costs for sampling and costs for shipping or transporting samples to the laboratory. This will probably add another \$500 per month. If composite samples are required, labor costs will be significantly higher or a couple automated samplers will be required at substantial

capital cost. Reduction in monitoring requirements could be a significant help to this community. TD&H requests EPA's consideration in this matter.

Response. While the regulations do not require the permit authority to consider cost when establishing monitoring requirements, EPA is careful to only require the monitoring necessary to provide sufficient information about the discharge. The permitting authority will consider monitoring reductions for the reissuance of this permit.